

REMARKS

Summary of the Office Action

Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Zhang (US 6,800,873).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Jung et al. (US 6,549,249 B2).

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satake (US 6,801,267 B2) in view of Fujikawa et al. (US 6,297,519 B1).

Summary of the Response to the Office Action

Applicant has amended claims 12, 14 and 72 to further define the invention and cancelled claims 13 and 71. Accordingly, claims 1, 3, 4, 7-12, 14 and 72 are pending for consideration.

All Claims Define Allowable Subject Matter

The rejection of claim 12 under 35 U.S.C. 102(e) as being anticipated by Zhang is respectfully traversed and reconsideration is requested.

Independent claim 12 recites a combination of elements, including, for example, "at least one layer of Ti layer and TiO₂ layer on the at least one surface of the gate electrode, the semiconductor layer and the source and drain electrodes". Zhang does not teach or suggest at least this feature of the claim invention. Accordingly, Applicants respectfully request withdrawal of the rejection of claims 31.

The rejection of claim 13 under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Jung et al. is respectfully traversed and reconsideration is requested.

Independent claim 12 which is amended to include claim 13 recites a combination of elements, including, for example, “at least one layer of Ti layer and TiO₂ layer on the at least one surface of the gate electrode, the semiconductor layer and the source and drain electrodes. ”

None of the cited references, singly or in combination, teaches or suggests at least the aforementioned feature of the claimed invention.

In rejecting claim 13, the Examiner acknowledges that Zhang “fails to disclose that the metal masking layer includes Ti.” See Office Action, lines 14-15 page 3. The Examiner cites Jung et al. as allegedly teaching “a metal masking layer including Ti.” See Office Action, line 16 page 3. As motivation for modifying the deficiency of Zhang with Jung et al., the Examiner states, “It would have been obvious to one having ordinary skilled in the art at the time the invention was made to employ a metal masking layer since Ti is well known in the art to be a material used as a data line, or gate line due to its conductive properties.”

Applicants respectfully disagree with the Examiner’s statement. Jung et al. merely discloses “A data line 600 made of Ti or TiN is formed on the interlayer insulating film 500 and located in the vertical direction.” (See, lines 49-51 column 21) and “Moreover, since the drain electrode 620 is made of Ti or TiN, erosion of the drain electrode does not easily occur even when an ITO etchant is infiltrated to the drain electrode 620 through the over-etched contact holes C3.” (See, lines 54-58 column 23). That is, in Jung et al. the data line and the drain electrode are made of Ti. In contrary to Jung et al., in the claimed invention the Ti or

TiO₂ layer is disposed on the source electrode. That is, the Ti or TiO₂ layer of the claimed invention is separate layer from the data line or the source electrode and the Ti layer of Jung et al. is not the masking layer. Thus, Jung et al. fails to teach or suggest at least “at least one layer of Ti layer and TiO₂ layer on the at least one surface of the gate electrode, the semiconductor layer and the source and drain electrodes”

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 13 which is added in claims 12.

The rejection of claim 72 under 35 U.S.C. 103(a) as being unpatentable over Satake in view of Fujikawa et al. is respectfully traversed and reconsideration is requested.

Independent claim 72 recites a combination of elements, including, for example, “at least one Ti layer on the at least one surface of the gate electrode, the semiconductor layer, and the source and drain electrodes” and “a TiO₂ layer on at least one of the whole surface areas of the passivation layer or the pixel electrode.” None of the cited references, singly or in combination, teaches or suggests at least the aforementioned feature of the claimed invention.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 72.

CONCLUSION

In view of the foregoing, Applicant requests the entry of this Amendment to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By: 

Robert J. Goodell
Reg. No. 41,040

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CUSTOMER NO. 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, NW
Washington, D.C. 20004
Tel.: (202) 739-3000
Fax: (202) 739-3001